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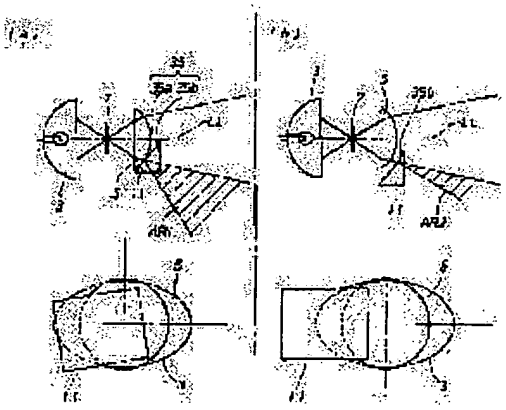
(54) HEADLAMP DEVICE FOR VEHICLE

(57)Abstract:

PURPOSE: To provide a light distribution pattern which can ensures an angular range of the view in the scheduled traveling direction at the time of steering while maintaining the angular range of the front view and can ensure the angu lar range of the view in the direction between the front and the scheduled traveling direction, and prevent the driver of an on-coming vehicle from being dazzled.



CONSTITUTION: There is disposed, ahead of the lens 5 of a projector head light, a prism 11 which changes angle of refraction continuously in a cross direction. The prism 11 is moved continuously in the right/left direction by a rack and pinion mechanism and is rotated by a rotating gear mechanism to from the irradiating light on the side of a main optical axis LL into the beam of light whose angle in downward/sideward direction is increased as it goes farther from the proximity of the main optical axis LL so as to obtain an extended irradiation region ARI for right turning which is expanded largely around the proximity of a vehicle body while irradiating the front slant part. By adjusting right/left movement amount and rotational amount, it is possible to irradiate the extended irradiation

region AR2 which is desirable for high-speed curve running and course change.

LEGAL STATUS

[Date of request for examination]

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[Date of final disposal for application]

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CLAIMS

[Claim(s)]
[Claim 1] The headlight which is attached in vehicles and illuminates the front this -- it prepares in the flank of the main optical axis of a headlight possible [repositioning] -- having -- the optical means which can change the direction of radiation of the light of the main optical-axis flank adjusting the position of these optical means -- the light of the aforementioned main optical-axis flank -- the side -- an adjustment means to irradiate downward the object equipped with the above for vehicles -- a headlight -- you is equipment and you makes it the optical element as which the aforementioned adjustment means determines the optical property of the aforementioned optical means located within the limits of the light of the aforementioned main optical-axis flank in the state changed with the parts of optical means continuously -- the above -- it is characterized by to have the beam-of-light twist means which enlarges continuously the angle which turns to the angle which separates the light of side facing down from the main optical axis, and which is alike, follows and turns to the
[Claim 2] the object for vehicles according to claim 1 characterized by the aforementioned beam-of-light twist means being a rotation means to rotate these optical means relatively to the main optical axis while constituting an optical element from an optical element changed continuously crosswise looked at the aforementioned optical means from the transverse plane -- a headlight -- equipment
[Claim 3] It is a means to change the direction of light through which it is arranged ahead of a headlight and passes from behind. the aforementioned optical means -- the above -- It constitutes from an optical element to which the optical element was changed so that the angle which turns to the side of the light which passes the part concerned as it separates from the side near the main optical axis might be enlarged continuously. the object for vehicles according to claim 2 to which the aforementioned adjustment means is characterized by having a right-and-left move means to move these optical means to a longitudinal direction -- a headlight -- equipment
[Claim 4] the object for vehicles according to claim 3 characterized by the aforementioned optical means being the prism which formed a part of plane of incidence and/or outgoing radiation side [at least] on the curved surface -- a headlight -- equipment
[Claim 5] the object for vehicles according to claim 3 characterized by the aforementioned optical means being the Fresnel lenses which changed continuously the configuration and/or arrangement pitch of the serrate cross-section section which are formed in a front face -- a headlight -- equipment
[Claim 6] the object for vehicles according to claim 3 characterized by the aforementioned optical means being hologram optical elements which have the internal structure to which the direction where the body light to a reference beam goes was changed continuously -- a headlight -- equipment
[Claim 7] either of the claims 1 - claims 6 which are characterized by providing the following -- the object for the vehicles of a publication -- a headlight -- equipment Furthermore, a vehicle speed detection means to detect the vehicle speed A steering angle detection means to detect a steering angle A luminous-intensity-distribution pattern storage means to memorize two or more luminous-intensity-distribution patterns corresponding to the vehicle speed and a steering angle Luminous-intensity-distribution control means which choose a specific luminous-intensity-distribution pattern out of two or

more luminous-intensity-distribution patterns by which storage was carried out [aforementioned] based on the aforementioned vehicle speed by which detection is carried out, and the steering angle, and carry out drive control of the aforementioned right-and-left adjustment means and the vertical adjustment means based on the luminous-intensity-distribution pattern concerned

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] this invention -- the object for vehicles -- a headlight -- the object for vehicles which started equipment, especially enabled the steering directional vision community reservation at the time of steering etc. -- a headlight -- it is related with equipment
[0002]
[Description of the Prior Art] When a curve run and a right and left chip box are performed and vehicles make a course change etc., the field of view of the advance schedule direction may fully be unable to secure only by illuminating the front by the headlight. In order to secure the field of view in such a case conventionally, the thing equipped with the mechanism which shakes a headlight at right and left is known (for example, JP,61-2071243,A, JP,61-211146,A, or JP,61-61852,A).
[0003] however, with the technology of these, since there was fault that the direction of the front of vehicles was no longer illuminated conversely, in 4 LGT type lamp, inside 2 LGT is fixed, and in JP,64-74135,A, the device which also irradiates exactly the advance schedule direction at the time of steering is made, making outside 2 LGT movable and the vehicles front also comparing it with right and left, respectively
[0004] Moreover, although the technology prepare a cornering lamp is also known in order to carry out the field-of-view reservation at the time of such a right and left chip box with a front field of view, make right and left rotate the reflecting plate which built in a head lamp by switch operation of a driver's seat, and the technology which made a cornering lamp unnecessary by making an auxiliary luminous-intensity-distribution pattern as shown in drawing 10 , without changing the main optical axis is further indicated by JP,62-222507,A. In addition, with equipment given [this] in an official report, adjustment also of the angle to the horizontal axis of a reflecting plate was attained.
[0005]
[Problem(s) to be Solved by the Invention] However, since the technology of front 3 persons and JP,64-74135,A is the composition of changing an optical axis to right and left, it makes the operator of the vehicles which are going to come out of an oncoming car, an alley, etc. produce dazzling, and is not desirable on safe.
[0006] Moreover, as shown in drawing **, even if it could illuminate the front and this side brightly, the slanting front had the fault that it could not illuminate, and although JP,62-222507,A did not change the main optical axis, when there was a pedestrian who is going to cross a passage ahead [slanting], it had the problem of being hard to discover this. Although what is necessary is to change the angle to the horizontal axis of a reflecting plate, and just to have made the optical axis in an auxiliary luminous-intensity-distribution pattern turn to ahead, in order to also have made this slanting front bright, now, there was a problem that dazzling of an oncoming car could not be prevented.
[0007] Moreover, in course change on a highway etc., the luminous-intensity-distribution pattern for the field-of-view reservation at the time of steering needs to illuminate near the vehicles widely to illuminating a slanting front long distance including the slanting front at the time of the right and left

chip box in a low speed, and to realize exactly the various luminous-intensity-distribution patterns according to the operation situation of vehicles.
[0008] Then, reservation of the advance schedule direction at the time of steering and a front field of view can do this invention. It aims at offering equipment. and -- without it makes dazzling of operators, such as an oncoming car, cause the latus range to slanting front empty-vehicle both the latest -- the object for vehicles which can be irradiated and which consists of fundamental and concrete technical thought -- a headlight -- and the object for vehicles which enabled the exact field-of-view reservation based on the various luminous-intensity-distribution patterns according to the operation situation -- a headlight -- it was completed also for the purpose of offering equipment
[0009]
[Means for Solving the Problem and its Function] In equipment this purpose -- it should attain -- the object for the vehicles of this invention -- a headlight -- The headlight which is attached in vehicles and illuminates the front so that it may indicate to a claim 1, It is prepared in the flank of the main optical axis of a headlight possible [repositioning]. this -- with the optical means which can change the direction of radiation of the light of the main optical-axis flank In equipment adjusting the position of these optical means -- the light of the aforementioned main optical-axis flank -- the side -- the object for vehicles equipped with an adjustment means to irradiate downward -- a headlight -- the aforementioned adjustment means By making it the optical element which determines the optical property of the aforementioned optical means located within the limits of the light of the aforementioned main optical-axis flank in the state where it changed with the parts of optical means continuously the above -- it is characterized by having the beam-of-light twist means which enlarges continuously the angle which turns to the angle which separates the light of side facing down from the main optical axis, and which is alike, follows and turns to the bottom, and the side
[0010] this object for vehicles -- a headlight -- according to equipment, a beam-of-light twist means by making it the optical element which determines the optical property of optical means located within the limits of the light of the aforementioned main optical-axis flank in the state where it changed with the relative parts to the headlight of optical means continuously Since the angle which turns to the angle and the side it turns [side] to the bottom is continuously enlarged as the light of side facing down is separated from the main optical axis, the irradiation field expanded by optical means can consist of beams of light twisted aslant continuously. That is, for example, it makes it possible to irradiate the latus range AR 1 to the vehicles latest, including the slanting front by changing the direction of radiation to the beam of light with which a sideways angle and facing-down angle also becomes large continuously as it is made into a beam of light also with a small sideways angle and facing-down angle near [which was indicated to the drawing 4 (a) up side] the main optical axis and it goes outside.
[0011] Here, in this fundamental technical thought, the light of the main optical-axis flank changes the direction of radiation, and the main optical axis itself is not changed. Therefore, the field of view of the advance schedule direction at the time of a right and left chip box can be secured in a form possible to a check of the crossing person ahead of slant, without sacrificing a front field of view. And by twisting a beam of light continuously, as a whole, since light in these auxiliary luminous intensity distribution can be being made into a downward beam of light, it can also attain dazzle prevention of operation vehicles, such as an oncoming car.
[0012] in addition, this object for vehicles -- a headlight -- equipment -- for example, you may constitute as a rotation means according to claim 2 for which the aforementioned beam-of-light twist means rotates these optical means relatively to the main optical axis while constituting an optical element from like and an optical element changed continuously crosswise which looked at the aforementioned optical means from the transverse plane thus, the thing to constitute -- basic technology according to claim 1 -- the same -- facing down and the side -- while an expansion irradiation field with the beam of light which the angle of the sense was changed continuously and twisted it is securable, the beam of light in the state where it does not have such a twist can also respond required, and can be obtained
[0013] It is arranged ahead of a headlight. especially -- being according to claim 3 -- like and the aforementioned optical means -- the above -- Are a means to change the direction of light through which

it passes from behind, and it constitutes from an optical element to which the optical element was changed so that the angle which turns to the side of the light which passes the part concerned as it separates from the side near the main optical axis might be enlarged continuously. If [the aforementioned adjustment means] it has a right-and-left move means to move these optical means to a longitudinal direction since the physical relationship of optical means and a headlight can be adjusted to a longitudinal direction and a hand of cut -- the side, while being able to obtain the irradiation field AR 1 like drawing 4 (a), when irradiating the large range The auxiliary luminous-intensity-distribution pattern (AR2 reference of drawing 4 (b)) to which the side of a front long distance is expanded if needed is also realizable.

[0014] These optical means are easily realizable by considering as the hologram optical element which has the internal structure to which the direction where it considers as the Fresnel lens which changed continuously the configuration and/or arrangement pitch of the serrate cross-section section which more specifically use as the prism which formed a part of plane of incidence and/or outgoing radiation side [at least] on the curved surface, or are formed in a front face, or the body light to a reference beam goes was changed continuously.

[0015] In equipment either such a claim 1 - the claim 6 -- the object for the vehicles of a publication -- a headlight -- Furthermore, a vehicle speed detection means to detect the vehicle speed and a steering angle detection means to detect a steering angle, A luminous-intensity-distribution pattern storage means to memorize two or more luminous-intensity-distribution patterns corresponding to the vehicle speed and a steering angle, A specific luminous-intensity-distribution pattern is chosen out of two or more luminous-intensity-distribution patterns by which storage was carried out [aforementioned] based on the aforementioned vehicle speed by which detection is carried out, and the steering angle. If it has the luminous-intensity-distribution control means which carry out drive control of the aforementioned right-and-left adjustment means and the vertical adjustment means based on the luminous-intensity-distribution pattern concerned A vehicle speed detection means and a steering angle detection means can detect the operational status about the advance schedule direction of vehicles, and control which chose the optimal luminous-intensity-distribution pattern by luminous-intensity-distribution control means can be performed. Consequently, expansion of the irradiation field by the exact luminous-intensity-distribution pattern according to the operational status of vehicles is realizable.

[0016]

[Example] Hereafter, based on a drawing, it explains per [which applied this invention] example. the object for the vehicles of an example -- a headlight -- equipment 1 is equipped with the projector headlight 9 which consists of a lens 5 arranged ahead of the light source 3 and the light source 3, and a gobo 7 arranged near the 2nd focus of the light source 3, and the prism 11 arranged ahead of the lens 5 of this projector headlight 9 as shown in drawing 1

[0017] A gobo 7 is for cutting the beam of light which goes upwards from the light source 3 like illustration, passing, and carrying out beam luminous intensity distribution, and performs a switch with the luminous intensity distribution (the so-called high beam) which can also irradiate a distant place by being moved below. Prism 11 is constituted by the semicircle-like supporter 13 and one as shown in the front view of drawing 2 . This supporter 13 is being engaged through two pins 15 and 17 free [the circular guide slots 21 and 23 when it prepared in the angle 19, and sliding]. Moreover, the fanning gear 25 is engraved on the periphery of a supporter 13, and it is engaging with the rotation gear 27 of an angle 19 mostly attached in the center. That is, engagement support is carried out in three places through a supporter 13 at an angle 19, and prism 11 is constituted so that rotation which met the guide slots 21 and 23 by rotating the rotation gear 27 may be performed.

[0018] On the other hand, the rack 29 is formed in the lower part of this angle 19. The body and the pinion 33 attached in the fixed bracket 31 are engaging with this rack 29. That is, the angle 19 is constituted so that it can slide continuously to a longitudinal direction to the body according to a rack-and-pinion mechanism. Therefore, it can be slid on prism 11 also to a longitudinal direction with movement of an angle 19.

[0019] As prism 11 is shown in the plan of drawing 3 again, the oblique side section 35 consists of flat-

surface 35a and curved-surface 35b. Since the angle of refraction by prism 11 is decided by the dihedral angle and incident angle which plane of incidence and an outgoing radiation side make, by using curved-surface 35b, a dihedral angle changes continuously and angle of refraction also changes continuously.

[0020] Illustration (a) shows the right-and-left move position of the prism at the time of right-turn. the irradiation light of the flank of the main optical axis LL is keep away near the main optical-axis LL by moving prism 11 to the main optical-axis LL approach near the center of a lens 5 , and making it rotate to an illustration counterclockwise rotation like illustration -- alike -- following -- facing down and the side -- it considers as the beam of light with which the angle of the sense becomes large , and the expansion irradiation field AR 1 for the time of the right-turn widely expanded centering on near the body can obtain , also illuminating a front slant front An oncoming car etc. is not made to produce dazzling, in spite of prism's 11 rotating at this time, and also illuminating the slanting front, since the whole is a downward light. On the other hand, illustration (b) shows the example of prism arrangement at the time of a curve run and course change. The expansion irradiation field AR 2 for course change which expanded the irradiation light of the flank of the main optical axis LL focusing on the distant place can be obtained by moving prism 11 to the position of the grade concerning the edge of a lens 5 like illustration. Two different luminous-intensity-distribution patterns as shown in drawing 4 (a) and (b) as a result are easily realizable.

[0021] the object for vehicles which consists of these composition -- a headlight -- equipment 1 is attached in the right-hand side of vehicles anterior part in addition, the object for left-hand side which is the same as that of the composition mentioned above, and has the position of prism and its related equipment on the contrary -- a headlight -- equipment is attached in the forward left section of vehicles Drive control is carried out by the control system shown in drawing 5 , and these realize various luminous-intensity-distribution patterns.

[0022] This control system is constituted focusing on the control computer 41 equipped with CPU, ROM, RAM, Backup RAM, etc. A control computer 41 inputs a vehicle speed signal SPD and the steering angle signal theta from the vehicle speed sensor 43 and the steering angle sensor 45, performs luminous-intensity-distribution pattern selection processing according to the operation processing program in ROM, and outputs the drive control signal for realizing the luminous-intensity-distribution pattern to the prism rotation motors 47r and 47l. and the prism move motors 49r and 49l. The prism rotation motors 47r and 47l. are stepping motors for rotating the rotation gear 27 attached in the angle 19. Moreover, the prism move motors 49r and 49l. are stepping motors for rotating a pinion 33. in addition, a subscript "r" -- the headlight ahead of right-hand side -- a ** -- a subscript "l" -- left-hand side -- the thing for headlights is meant

[0023] If a luminous-intensity-distribution pattern reads the vehicle speed SPD and the steering angle theta (Step S1), searches the luminous-intensity-distribution pattern map 51 shown in drawing 7 according to these (Step S2) and specifies a luminous-intensity-distribution pattern as shown in drawing 6 , it will output the motorised signal according to it (Steps S3 and S4).

[0024] In addition, the luminous-intensity-distribution pattern map 51 is beforehand written in in ROM of a control computer 41. Moreover, "the luminous-intensity-distribution pattern 0" is a pattern at the time of a rectilinear-propagation run, and by this pattern, it makes the amount of rotation the vertical direction "0" while making it move to a left end and missing from the transverse plane of a lens 5, if prism 11 is said by drawing 2 . Moreover, "the luminous-intensity-distribution pattern 1" is equivalent to the luminous-intensity-distribution pattern at the time of the right-turn of drawing 4 (a), and it rotates greatly counterclockwise (forward left section a headlight clockwise rotation) while moving prism 11 to a lens center greatly, as exactly shown in drawing 3 (a). Furthermore, "the luminous-intensity-distribution pattern 2" is equivalent to the luminous-intensity-distribution pattern of drawing 4 (b), and it is made into the neutral state of the amount of rotation "0" while moving prism 11 to the state which started the flank of a lens a little, as exactly shown in drawing 3 (b). Furthermore, "the luminous-intensity-distribution pattern 3" and the "luminous-intensity-distribution pattern 4" correspond at the "time", respectively. [left turn and the "time of a left curve run or left course change"]

[0025] it explained above -- as -- the object for the vehicles of an example -- a headlight -- equipment 1 While moving this to a longitudinal direction continuously through the rack-and-pinion mechanisms 29 and 33 using the prism 11 to which the dihedral angle was continuously changed by using curved-surface 35b Since it can rotate by the rotation mechanisms 25 and 27, the light of the portion of the outside of the main optical axis LL since it can consider as the twisted beam of light which enlarged continuously the angle which turns to the angle which separates from the main optical axis LL, and which is alike, follows and turns to the bottom, and the side -- the side of the vehicles latest [time / of a right and left chip box] -- it not only can irradiate extensive **, but it can irradiate to the range ahead of slant And since a means to give a twist to a beam of light has realized this, the expansion irradiation field AR 1 can be constituted from a downward beam of light, and it can avoid making the operator of the vehicles which are going to come from the alley of an oncoming car or the front cause a dazzle state as the whole. And if the drive state of the rack-and-pinion mechanisms 29 and 33 and the rotation mechanisms 25 and 27 is adjusted, a luminous-intensity-distribution pattern suitable in lane change, a high-speed curve run, etc. is also realizable.

[0026] Moreover, since drive control of the prism 11 is carried out so that it may become the luminous-intensity-distribution pattern with which the control computer 41 searched the luminous-intensity-distribution pattern memorized beforehand based on the vehicle speed SPD and the steering angle theta, automatically, if it is in a curve run or course change conversely, the irradiation range is expandable [at the time of a right and left chip box, it can be begun widely to illuminate the direction of a right and left chip box in front of vehicles downward, and] at the distant place. Consequently, the irradiation field according to operational status is exactly expandable.

[0027] By either such remarkable operation or effect, since the main optical axis is not changed, it is not said bad that the field of view in front of straight becomes. In addition, although an expansion irradiation field becomes a little dark, this can adjust the luminous intensity of the original light source 3 even to how by making it high. Although one example of this invention was explained above, this invention is not limited to this example at all, and can be carried out in the mode to which the range which does not deviate from the summary becomes various.

[0028] For example, instead of prism 11, as shown in drawing 8 , it is good also as composition which arranges Fresnel lens 101 ahead of a lens 5. Although how [as / in a lighthouse etc.] to be able to make a beam of light into parallel light, able to reach also to a distance, make, and use is well known as how to use a Fresnel lens In this modification, in the side near the main optical-axis LL, what was considered as the composition which changed **** of the serrate element 103 formed in the tooth back, height, and the pitch was used so that angle of refraction to the side might be enlarged as the angle of refraction to the side was small and it separated from the main optical axis LL. In addition, since Fresnel lens 101 is only supported by the supporter 13 instead of the prism 11 of drawing 2 , although the drive of this Fresnel lens 101 is completely the same as the example by prism, and detailed explanation is omitted, the completely same operation and effect as an example are done so. In addition, according to this modification, there is an advantage that an equipment configuration can be made thinner than the example using prism.

[0029] Moreover, as other modifications, as shown in drawing 9 , the composition which arranges the hologram optical element 111 ahead of a lens 5 is also employable. That is, not only expansion of the irradiation field by refraction but the technique by interference of light is employable. By the side near the main optical-axis LL, the angle body light turns [angle] to the side adjusts beforehand internal structures, such as an interference fringe which determines the direction where body light [as opposed to a reference beam in the hologram element 111 used here] goes, so that it may become large continuously as it is small and separates from the main optical axis LL. Therefore, the completely same operation and effect as the case where it is based on prism or a Fresnel lens are done so. In addition, the drive in this case can also use the mechanism of an example as it is.

[0030] You may use the reflecting plate from which the curvature of a reflector differs continuously by the part besides these modifications. Moreover, what is necessary is to be good also as composition to which the curvature of a reflector is partially changed using the mechanism made to deform the reflector

of a headlight itself with oil pressure etc., and just to obtain the twisted beam of light by changing continuously in the case of the use from the beginning by the part the optical element [optical means / various] according to the property.
[0031] Moreover, although the luminous-intensity-distribution pattern was only changed by the right and left chip box, the curve, or course change in the example, you may define a luminous-intensity-distribution pattern still more finely. It excels in the point that still finer control can perform it immediately only by changing a luminous-intensity-distribution pattern map since the prism 11 of an example can make an irradiation field able to expand continuously or can change the direction of radiation of the vertical direction continuously, and this effect is common also in the modification mentioned above again.
[0032] In addition, not only a project type thing but also about the form of a headlight, a sealed-beam type may be used and, of course, a variant headlight is sufficient.
[0033]
[Effect of the Invention] it explained in full detail above -- as -- the object for the vehicles of this invention -- a headlight -- when according to equipment the luminous-intensity-distribution pattern which can secure a field of view also in the advance schedule direction at the time of steering, and moreover secures a field of view also about the direction of [between the front and this advance schedule direction] can be obtained and a crossing person etc. exists ahead [slanting], maintaining a front field of view, it becomes possible to also check this exactly Moreover, since this luminous-intensity-distribution pattern is constituted by the downward beam of light as a whole, it does not make operators, such as an oncoming car, cause dazzle.
[0034] moreover -- being according to claim 2 -- it needs -- if constituted -- facing down and the side -- while an expansion irradiation field with the beam of light which the angle of the sense was changed continuously and twisted it is securable, the beam of light in the state where it does not have such a twist can also be obtained if needed especially -- being according to claim 3 -- it needs -- if constituted, since the physical relationship of optical means and a headlight can be adjusted to a longitudinal direction and a hand of cut -- the side -- when irradiating the large range, while being able to obtain the irradiation field AR 1 like drawing 4 (a), the auxiliary luminous-intensity-distribution pattern (AR2 reference of drawing 4 (b)) to which the side of a front long distance is expanded if needed is also realizable
[0035] The concrete optical means like instantiation according to claim 4 to 6 can attain this effect easily. furthermore -- being according to claim 7 -- it needs -- the headlight according to claim 1 to 6 which does the starting remarkable effect so with constituting -- certain moreover taking advantage of the advantage of equipment, expansion of the irradiation field by the exact luminous-intensity-distribution pattern according to the operational status of vehicles can be realized automatically

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] the object for the vehicles of an example -- a headlight -- it is the outline block diagram seen from the side of equipment
[Drawing 2] the object for the vehicles of an example -- a headlight -- it is the outline block diagram seen from the transverse plane of equipment
[Drawing 3] the object for the vehicles of an example -- a headlight -- it is explanatory drawing of the operating state of equipment
[Drawing 4] the object for the vehicles of an example -- a headlight -- it is explanatory drawing which illustrates the luminous-intensity-distribution pattern by equipment
[Drawing 5] the object for the vehicles of an example -- a headlight -- it is the outline block diagram of the control system of equipment
[Drawing 6] the object for the vehicles of an example -- a headlight -- it is the flow chart of control processing of equipment
[Drawing 7] It is explanatory drawing which illustrates the luminous-intensity-distribution pattern map of an example.
[Drawing 8] the object for the vehicles of a modification -- a headlight -- it is the flat-surface outline block diagram of equipment
[Drawing 9] the object for the vehicles of a modification -- a headlight -- it is the flat-surface outline block diagram of equipment
[Drawing 10] It is the plan of the luminous-intensity-distribution pattern at the time of the conventional right-turn.
[Description of Notations]
1 ... the object for vehicles -- a headlight -- equipment and 3 ... the light source and 5 ... a lens and 7 ... a gobo -- 11 [... A rotation gear 29 / ... Rack,] ... Prism, 25 ... A fanning gear, 27 33 [... Vehicle speed sensor,] ... A pinion, 41 ... A control computer, 43 45 ... A steering angle sensor, 47r, 47l. ... Prism rotation motor, 49r, 49l. [... An expansion irradiation field, LL / ... A main optical axis, 101 / ... A Fresnel lens 103 / ... A serrate element, 111 / ... Hologram optical element.] ... A prism move motor, 51 ... A luminous-intensity-distribution pattern map, AR1, AR2

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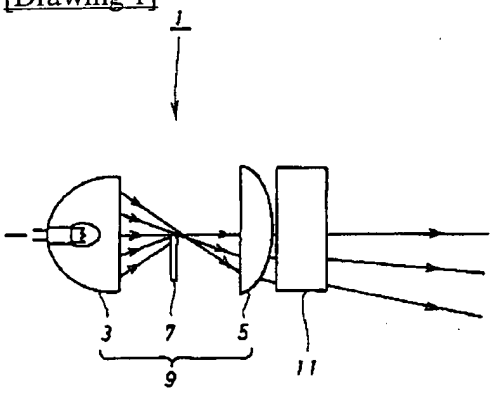
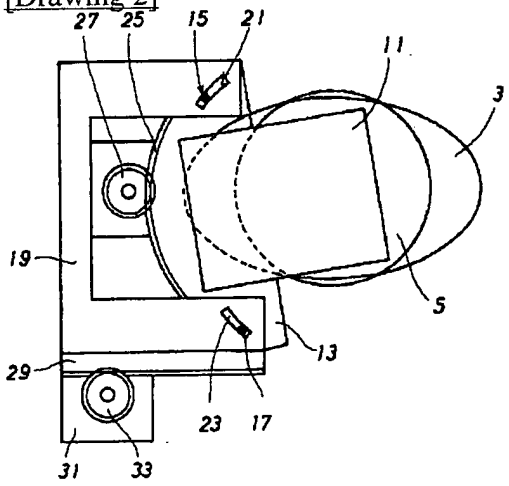
DRAWINGS

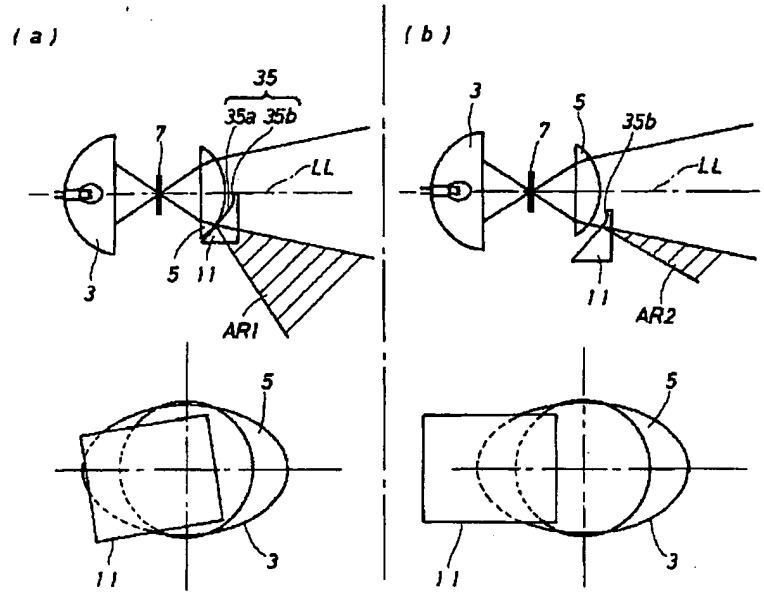
[Drawing 1]



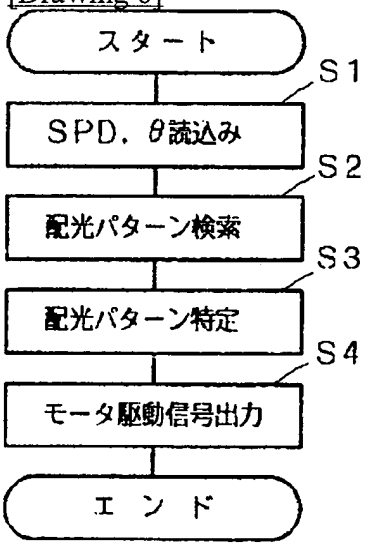
[Drawing 2]



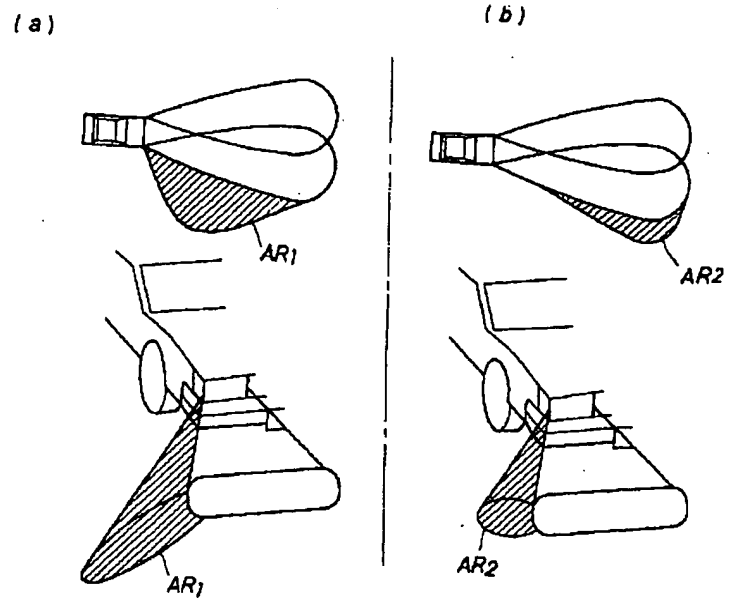
[Drawing 3]



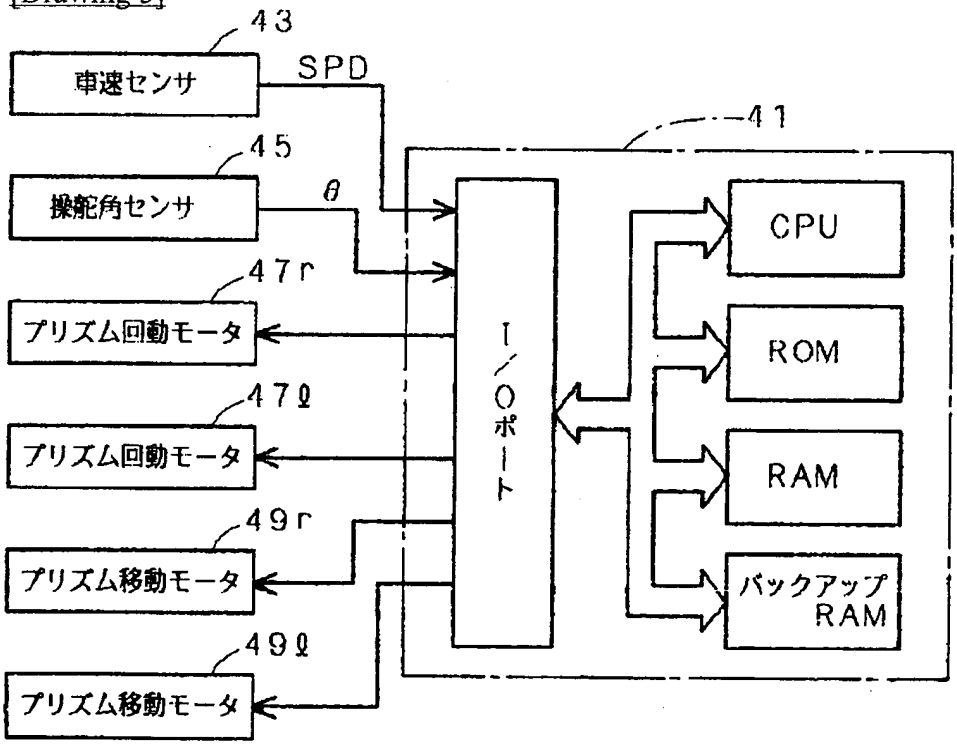
[Drawing 6]



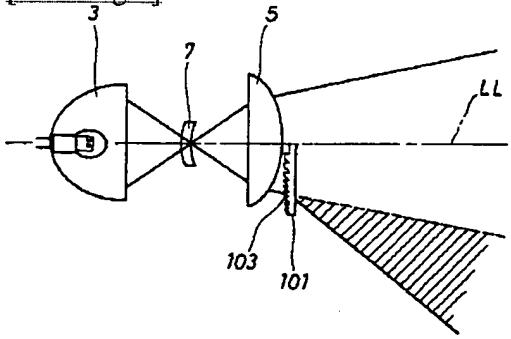
[Drawing 4]



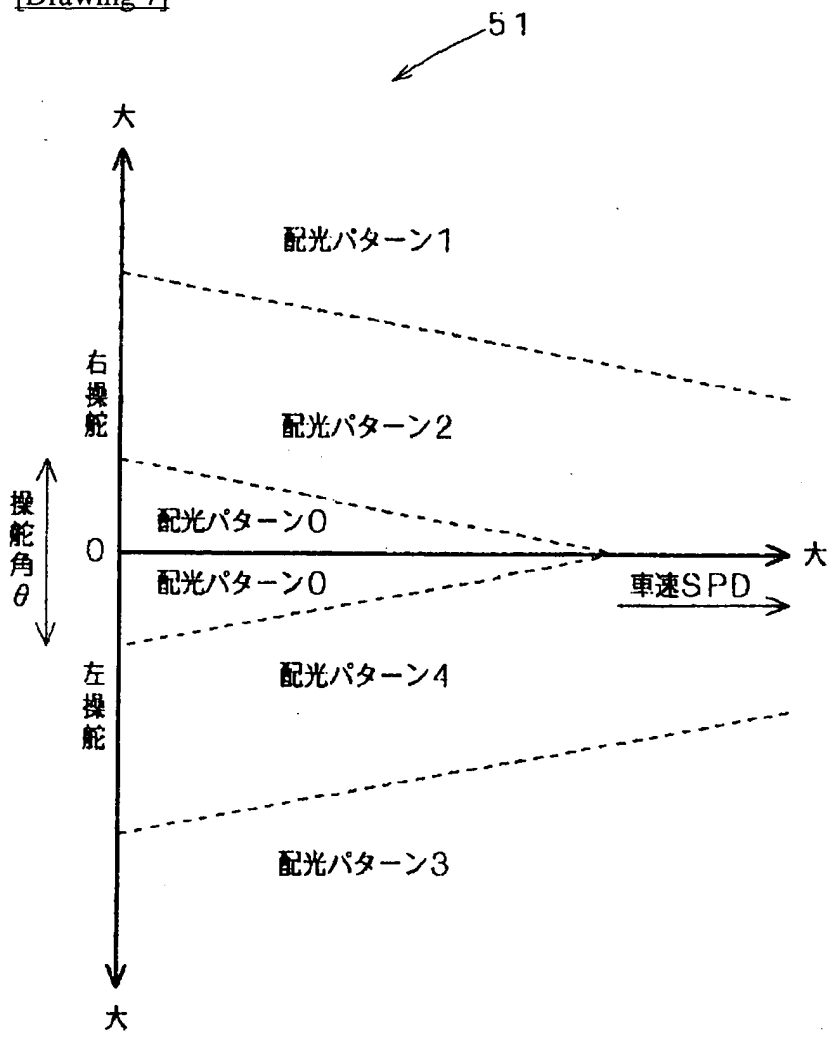
[Drawing 5]



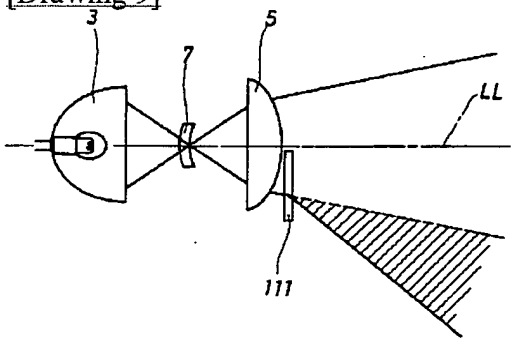
[Drawing 8]



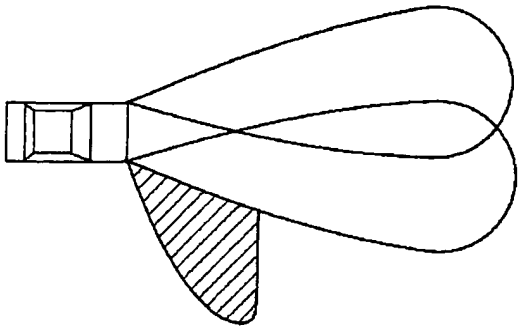
[Drawing 7]



[Drawing 9]



[Drawing 10]



[Translation done.]